***STEM Tales***  
**Frequently Asked Questions (FAQ)**

**Q. What is the *STEM Tales* project, and what are its goals?**

A. *STEM Tales* is designed to engage children, ages 4-8, and their families through a new children’s media series and 21 aligned library programs. The project is led by Twin Cities PBS (TPT), which will create a series of videos that include diverse STEM professionals including astronauts, scientists, and engineers reading STEM picture books from space, Earth, and sea. The read-alouds will be complemented by children engaging in STEM activities, bookended by an animated story featuring characters who travel the Earth (and into space!) delivering books to real-life STEM professionals for story time. This project is funded by the National Science Foundation.

While research shows that in-person read-alouds are very effective at teaching children literacy skills, little is known about how *media read-alouds* impact children’s literacy skills and academic knowledge, or if they motivate children to future careers. There is little research on how media read-alouds help children learn academic concepts and processes, such as language or math, science inquiry or the engineering design process. Due to the rise of remote learning, along with an increase in young children watching media across different platforms, many STEM-aligned picture books read by celebrities and others have appeared online to support children’s language and literacy learning.

***STEM Tales*** media will feature diverse STEM professionals as readers, underscoring the maxim, “If you can see it, you can be it,” Readers will read STEM picture books from various places on Earth (e.g., a mountain, a forest, a river, the ocean coast!) highlighting the skills it takes to be a STEM professional. Media read-alouds will be enriched with animation and live-action of children doing STEM, easily replicable at home or in the library. Key academic vocabulary related to STEM will introduce children to new words in multiple contexts. The project’s research will explore how media read-alouds impact children’s STEM content learning, literacy skills and interest in and awareness of STEM careers. The evaluation will examine librarians’ training and program implementation, seeking to understand how they engage children and parents/caregivers around STEM topics and careers.

**Q. What do you mean by “STEM”?**

A. STEM stands for Science, Technology, Engineering, and Math, but it also refers to a way of thinking and solving problems. STEM involves deepening and using one’s creativity, curiosity, critical thinking skills, and communication skills. Library staff can play a critical role in giving kids access to STEM concepts and opportunities and related career paths. Regardless of their ultimate career path, STEM learning also prepares youth to face everyday challenges, no matter what field they study and work in. Youth need continual opportunities and support to persist in their own STEM learning journeys.

**Q. What does “historically underrepresented in STEM fields” mean?**

A. The representation of certain groups in STEM education and occupations differs from their representation in the U.S. population. Women, Hispanic or Latino/a/x, Black or African American, American Indian and Alaska Native, Pacific Islanders and Native Hawaiian groups have been historically excluded from opportunities that can get them into STEM fields, and while these groups have gradually increased their share of STEM college degrees, they remain underrepresented among STEM degree recipients and STEM careers.

**Q. What does the acronym DEIA stand for?**

A. DEIA stands for Diversity, Equity, Inclusion, and Accessibility.

**Q. What do you mean by “digital media” and “media read-alouds"?**

A. Digital media uses electronic devices to deliver content, such as videos, online resources, apps, etc. For *STEM Tales*, it refers to video episodes that showcase educational content that can be shown directly to patrons and included in library programs. Media read-alouds are videos that show diverse STEM professionals reading picture books, written by diverse authors and featuring diverse characters.

**Q. What is the project timeline?**

A.

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| --- | --- | --- | --- |
|  | **Year 1 (2022-23)** | **Year 2 (2023-24)** | **Year 3 (2024)** |
| **Media** | Produce new digital media. | Series launches online. | Tracking of online usage. |
| **Library STEM Outreach** | RFP for library participation. Activity and Family Guides developed. 42 librarians trained. | 21 STAR Net libraries provide STEM programs for grade preK-2 children and families. | Libraries surveyed on their continued use of resources. |
| **Research (children)** | Research instruments are developed for children. | Research on the use of media with children. | Research completed and disseminated. |
| **Evaluation (librarians, parents)** | Front-end on pilot episode and activities. Formative evaluation of PD, media, kits and guides. | Summative evaluation of library STEM programs and take-home kits for families. | Summative evaluation disseminated. |

**Q. What benefits do participating libraries receive?**

A. If selected, the library will receive a $1600 stipend in support of the program, a kit of materials for facilitating four programs with youth ages 4-8, and 10 kits with a book for families to take home. Additionally, the participating libraries will receive virtual professional development in the fall of 2023 on the use of digital media and STEM activities, as well as gender equitable and culturally responsive strategies to engage children and families in multigenerational STEM library programs. Librarians will attend two 2-hour online workshops and two follow-up webinars at which they can share insights and challenges, ask questions, and receive ongoing support.

There is an option for eight libraries to receive an extra $500 to allow the project researcher to observe programming and conduct interviews with participating families. Funding for transportation reimbursement for the families will be provided.

**Q. What are the participating libraries required to accomplish?**

A. Libraries selected for the *STEM Tales* project are expected to:

* Participate in a front-end evaluation (via an online or paper survey) in the fall of 2022.
* Attend two 2-hour long virtual professional development in the fall of 2023 and two follow-up webinars for ongoing support.
* Implement four *STEM Tales* programs (of 1-2 hours each) in 2024 with at least ten children and their parents/caregivers. These programs will consist of viewing one *STEM Tales* episode, doing one STEM activity, and sharing information about the reader’s career.
* Participate in a summative evaluation (via an online or paper survey) in 2024.

There are additional *optional* activities that libraries can participate in:

* Participate in the Librarian Advisory Committee and conduct focus group discussions with library staff and families via videoconference in the fall of 2022 and feedback on the professional development materials in the fall of 2023. Those who participate will receive a $50 online gift card.
* In 2024 (January-August), eight libraries will be invited to allow the project researcher to observe programming and conduct interviews with participating families. These libraries will receive an extra $500.
* After completing the required summative evaluation survey in 2024, ten library staff who indicate interest in the survey will be asked to participate in a telephone interview.

**Q. How do I know if my library is eligible to apply?**

A. The STEM Tales Project is open to all public libraries from three regions: the Gulf Coast, the Great Lakes and the Northeast of the United States.

**Q. What U.S. states are located in those three regions?**

A.

The Gulf Coast:

Alabama, Florida, Louisiana, Mississippi, and Texas.

The Great Lakes:

Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin.

The Northeast:

Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania.

**Q. How do I apply to be part of the *STEM Tales* project?**

A. Apply online here: [*https://www.surveymonkey.com/r/2YCJRHT*](https://www.surveymonkey.com/r/2YCJRHT)

**Q. What will make a successful applicant?**

A. Applications will be evaluated according to the following criteria:

* The size and demographics of the community. *The selection committee will prioritize submissions from areas with above average populations of demographics defined by the National Science Foundation as underrepresented in STEM (Hispanic or Latino/a/x, Black or African American, American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander). Additional consideration will be given to libraries that demonstrate the need for resources to support learning in their community (e.g., low median household income and/or education levels).*
* Evidence that the site has support from the library administration and community in planning for the program and that participation in the program aligns to library goals or desired outcomes regarding STEM education.
* Evidence that the site is committed to prioritizing diversity, equity, inclusion, and accessibility and can reach audiences underrepresented in STEM and market the program to those audiences effectively.
* Evidence that the site has the capacity to carry out programming requirements, including the interest and capacity to utilize digital media in facilitating programs for children ages 4-8.

You can view the scoring rubric here: <https://www.starnetlibraries.org/2020/wp-content/uploads/2022/10/STEM-Tales-Scoring-Rubric.docx>

*This material is based upon work supported by the National Science Foundation under Grant* *Number* DRL-2148023*. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.*

